

AD-A106 697

ARMY ELECTRONICS RESEARCH AND DEVELOPMENT COMMAND WS--ETC F/6 4/1  
193040 MLRS, MISSILE NUMBER BN-049, ROUND NUMBER V-188/MD-42, 1--ETC(U)  
SEP 81 D C KELLER

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Sept 1981

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LEVEL II

METEOROLOGICAL DATA REPORT

19304D MLRS  
Missile Number BN-049  
Round Number V-188/MD-42  
11 Sept 1981

by

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ELECTED  
NOV 05 1981  
S E D

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ATMOSPHERIC SCIENCES LABORATORY  
WHITE SANDS MISSILE RANGE, NEW MEXICO

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UNITED STATES ARMY ELECTRONICS COMMAND

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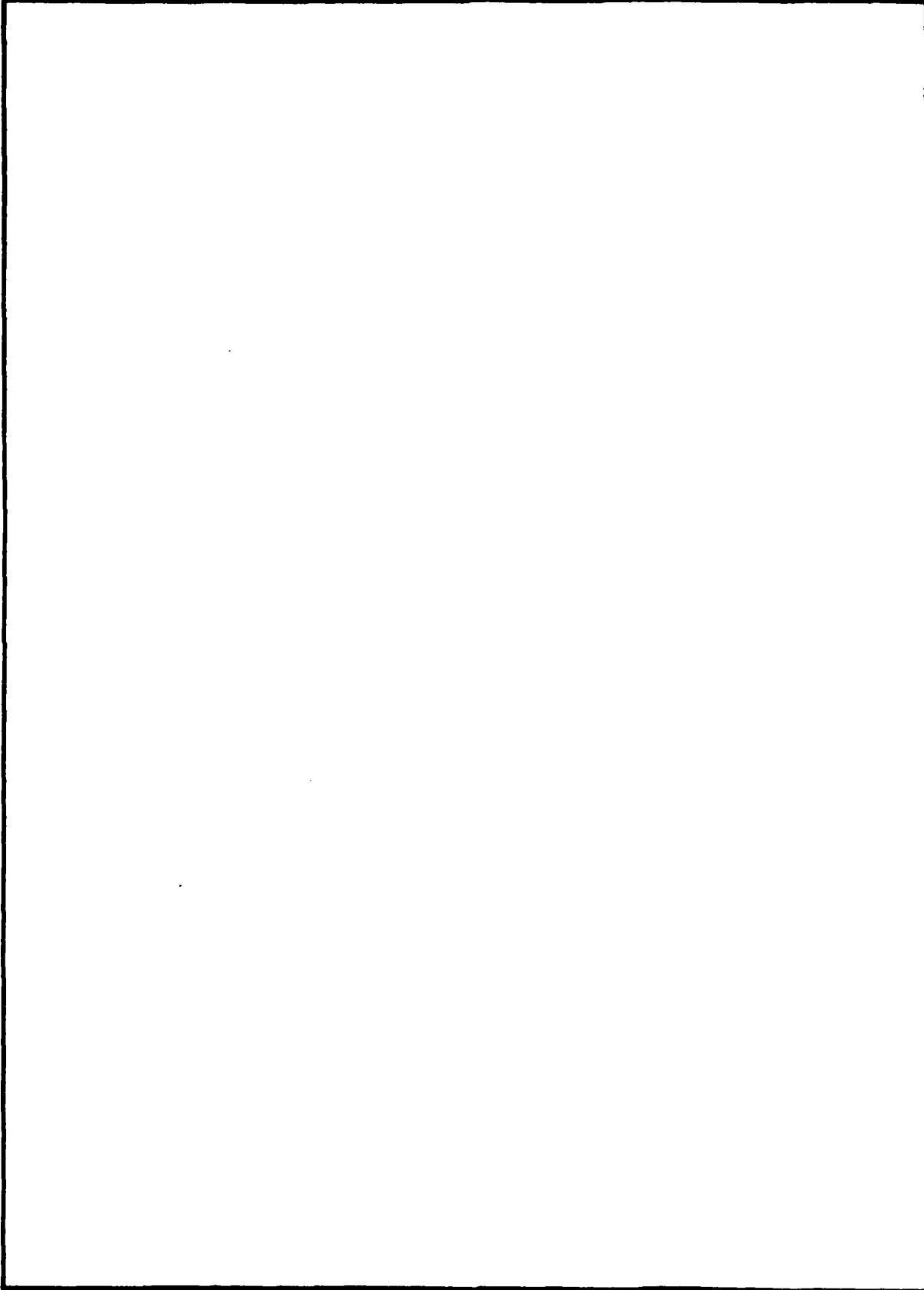
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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Meteorological data gathered for the launching of the 19304D MLRS, Missile Number BN-049, Round Number V-188/MD-42 presented in tabular form.		

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CONTENTS

	PAGE
INTRODUCTION-----	1
DISCUSSION-----	1
GENERAL AREA MAP-----	2
LAUNCH AREA DIAGRAM-----	3
TABLES:	
1. Surface Observations taken at 0904 MDT at LC-33-----	4
2. Anemometer-Measured Wind Speed and Direction, LC-33 Fixed Pole, taken at 0904 MDT-----	5
3. Anemometer-Measured Wind Speed and Direction, Tower Levels 1, 2, 3, and 4, taken at 0904 MDT-----	5
4. Launch and Impact Pilot-Balloon Measured Wind Data-----	6
5. Aiming and T-Time Computer Met Messages-----	7
6. WSD Significant Level Data at 0600 MDT-----	8
7. WSD Upper Air Data at 0600 MDT-----	9
8. WSD Mandatory Levels at 0600 MDT-----	11
9. LC-37 Significant Level Data at 0700 MDT-----	12
10. LC-37 Upper Air Data at 0700 MDT-----	13
11. LC-37 Mandatory Levels at 0700 MDT-----	15
12. WSD Significant Level Data at 0800 MDT-----	16
13. WSD Upper Air Data at 0800 MDT-----	18
14. WSD Mandatory Levels at 0800 MDT-----	22
15. LC-37 Significant Level Data at 0904 MDT-----	22
16. LC-37 Upper Air Data at 0904 MDT-----	22
17. LC-37 Mandatory Levels at 0904 MDT-----	26

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24 Reduced

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## INTRODUCTION

19304D MLRS, Missile Number BN-049, Round Number V-188/MD-42, was launched from LC-33, White Sands Missile Range (WSMR), New Mexico, at 0904:24 MDT, 11 Sept 1981. The scheduled launch time was 0900 MDT.

## DISCUSSION

Meteorological data were recorded and reduced by the White Sands Meteorological Team, Atmospheric Sciences Laboratory (ASL), White Sands Missile Range, New Mexico. The data were obtained by the following methods:

### 1. Observations.

#### a. Surface:

(1) Standard surface observations to include pressure, temperature ( $^{\circ}$ C), relative humidity, dew point ( $^{\circ}$ C), density (gm/m $^3$ ), wind speed and direction, and cloud cover were made at the LC-33 Met Sites at T-0 minutes.

(2) Anemometer data were provided from existing pole-mounted and tower-mounted anemometers at LC-33. Monitor of wind speed and direction from one anemometer was also provided in the launch control room.

#### b. Upper Air:

(1) Low level wind data were obtained from Pilot-Balloon observations at:

### SITE AND ALTITUDE

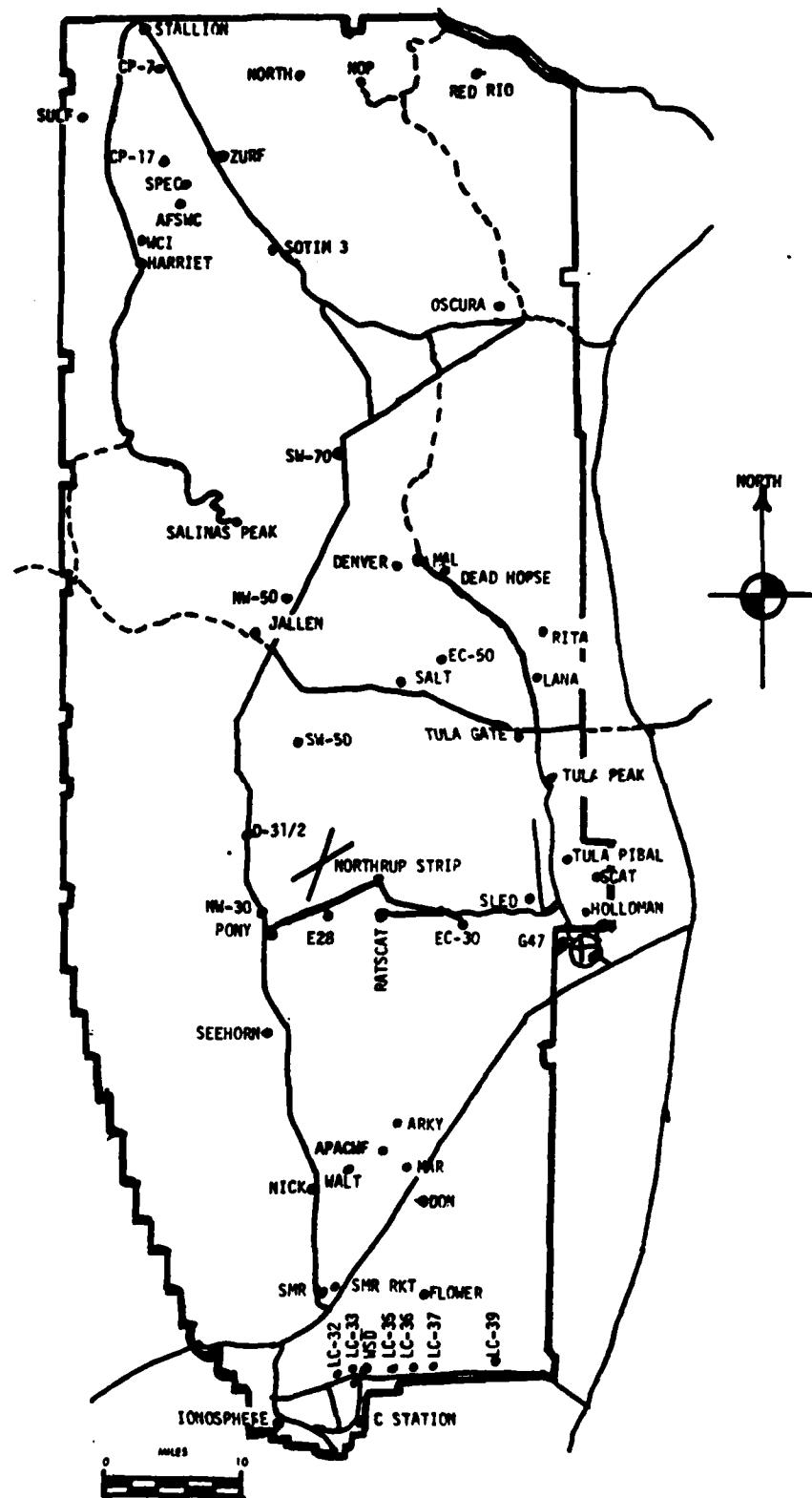
LC-33	2 KM
NICK	2 KM

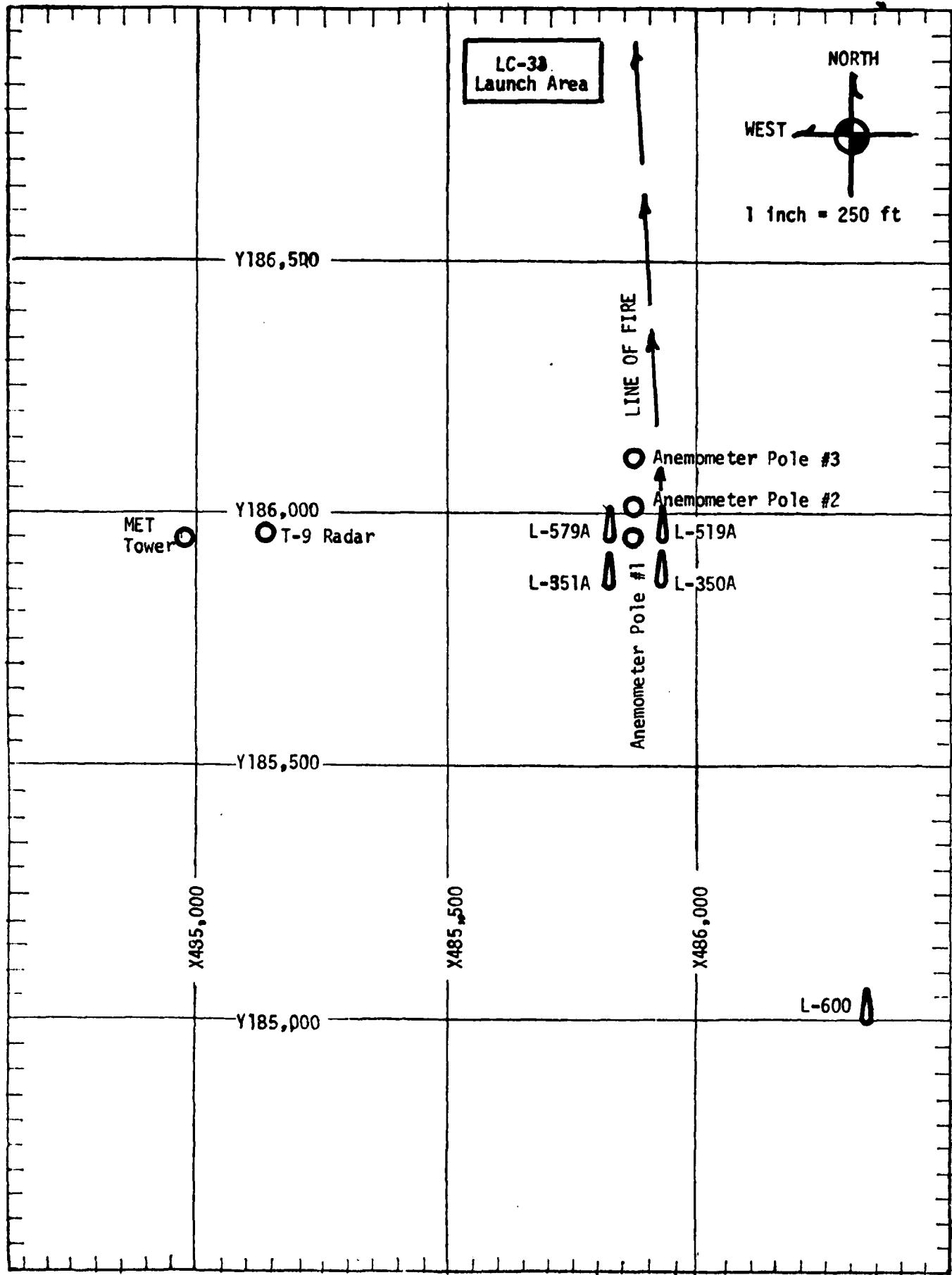
(2) Air structure data (rawinsonde) were collected at the following Met Sites:

### SITE AND TIME

WSD	0600 MDT
LC-37	0700 MDT
WSD	0800 MDT
LC-37	0904 MDT

## WSMR METEOROLOGICAL SITES





## PROJECT SURFACE OBSERVATION

TABLE 1

DATE 11 DAY  
MONTH Sep YEAR 1981STATION LC-33X= 485,135.76 Y= 185,919.24 H= 3,988.57

TIME M D I	PRESSURE mb	TEMPERATURE OF °C	DEW POINT OF °C	RELATIVE HUMIDITY %	DENSITY gm/m <sup>3</sup>	WIND DIRECTION deg Tn	WIND SPEED kts	CHARACTER kts	VISIBIL- ITY
0904	883.5	24.4	14.6	54	1033			CAIM	40

OBSTRUCTIONS TO VISIBILITY	CLOUDS					REMARKS
	1st LAYER AMT	TYPE	2nd LAYER AMT	TYPE	3rd LAYER AMT	
0	CU	6,500	6	AC	12,000	1 CI 25,000 CU NE

## PSYCHROMETRIC COMPUTATION

TIME:	MDT	0904		
DRY BULB TEMP.	24.4			
WET BULB TEMP.	17.8			
WET BULB DEPR.	6.6			
DEW POINT	14.6			
RELATIVE HUMID.	54			

TABLE 2 LC-33 FIXED POLE ANEMOMETER MEASURED WINDS

POLE #1			POLE #2			POLE #3		
X485,874.29			X485,874.93			X485,877.29		
Y185,958.90			Y186,012.00			Y186,116.06		
H4018.74			H4033.57			H4063.92		
38.7 ft. AGL			53.0 ft. AGL			83.6 ft. AGL		
T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS
T-30	C A L M	T-30	340	01	01	T -30	C A L M	
T-20	C A L M	T-20	340	01	01	T -20	C A L M	
T-10	C A L M	T-10	340	01	01	T -10	C A L M	
T0.0	C A L M	T0.0	340	01	01	T 0.0	C A L M	
T+10	C A L M	T+10	340	01	01	T +10	C A L M	

TABLE 3 LC-33 METEOROLOGICAL TOWER ANEMOMETER MEASURED WINDS (202 FT TOWER)

LEVEL #1, 12 FEET X484,982.64, Y185,057.73, H3983.00 (base)			LEVEL #2, 62 FEET X484,982.64, Y185,057.73, H3983.00 (base)		
T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS
T-30	050	01	T-30	C A L M	
T-20	C A L M		T-20	C A L M	
T-10	C A L M		T-10	C A L M	
T0.0	C A L M		T0.0	C A L M	
T+10	036	01	T+10	C A L M	

LEVEL #3, 102 FEET X484,982.64, Y185,057.73, H3983.00 (base)			LEVEL #4, 202 FEET X484,982, Y185,057.73, H3983.00 (base)		
T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS
T-30	C A L M		T-30	C A L M	
T-20	C A L M		T-20	C A L M	
T-10	C A L M		T-10	C A L M	
T0.0	C A L M		T0.0	C A L M	
T+10	C A L M		T+10	C A L M	

TABLE 4T-TIME PILOT-BALLOON MEASURED WIND DATA  
DATE 11 Sept 1981SITE: LC-33  
TIME: 0904 MDT

WSTM COORDINATES:

X= 484,837.34

Y= 184,124.44

H= 3,975.60

SITE: NICK  
TIME: 0904 MDT

WSTM COORDINATES:

X= 470,734.56

Y= 255,775.64

H= 4,126.57

LAYER MIDPOINT METERS AGL	DIRECTION DEGREES		SPEED KNOTS	
SURFACE	C	A	L	M
150	021		04	
210	013		05	
270	005		06	
330	360		08	
390	360		08	
500	006		08	
650	029		06	
800	037		05	
950	015		03	
1150	305		04	
1350	343		06	
1550	342		07	
1750	342		08	
2000	327		07	

Data obtained from Double-Theodolite  
Tracked Pilot-Balloon Observations.

LAYER MIDPOINT METERS AGL	DIRECTION DEGREES		SPEED KNOTS	
SURFACE	C	A	L	M
150	319		02	
210	318		03	
270	317		04	
330	317		06	
390	318		06	
500	321		06	
650	355		04	
800	021		04	
950	025		05	
1150	354		06	
1350	318		06	
1550	333		06	
1750	347		08	
2000	337		08	

Data obtained from Single-Theodolite  
Tracked Pilot-Balloon Observation.

AIMING AND T-TIME COMPUTER MET MESSAGES  
11 Sept 1981

WSD 0600 MDT	LC-37 0700 MDT	WSD 0800 MDT	LC-37 0904 MDT
METCM1324064	METCM1324063	METCM1324064	METCM1324881
111200122881	111300124880	111400122882	111510124881
00036002 29140881	00000000 29130880	00036001 29360882	00000000 29460881
01033010 29430871	01025013 29280869	01129005 29470872	01017006 29510871
02019010 29600846	02018007 29480845	02014007 29500847	02005007 29560846
03548007 29380808	03617006 29310806	03060007 29330809	03034007 29330807
04497009 29010762	04529006 28990760	04561006 29070763	04554005 29070762
05537009 28650718	05560009 28610717	05603009 28720719	05604007 28690718
06567006 28260676	06577004 28170675	06587006 28310677	06557003 28250676
07253003 27830637	07222003 27720635	07244002 27880637	07226004 27820636
08374005 27410598	08352006 27310597	08389006 27460599	08315005 27400598
09437008 27040562	09407007 26990560	09417006 27090563	09423004 27060562
10447012 26810528	10448011 26780526	10422010 26780529	10433009 26760527
11411017 26580495	11419014 26490493	11411016 26560496	11418014 26530495
12421019 26070449	12411016 25970447	12391015 26050450	12389013 26100449

STATION ALTITUDE 3989.00 FEET MSL  
11 SEP. 61 0600 HRS MDT  
ASCENSIO. NO. 592

SIGNIFICANT LEVEL DATA  
25400.0592  
WHITE SANDS

TABLE 6

GEODETIC COORDINATES  
32.40043 LAT DEG  
106.37033 LON DEG

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE DEGREES CENTIGRADE	AIR DENSITY CENTIGRADE	REL. HUM. PERCENT
880.9	3789.0	16.2	14.7	91.0
864.4	4523.7	21.2	14.8	67.0
850.0	5002.5	21.0	12.7	59.0
832.2	5604.5	20.4	10.8	54.0
700.0	10434.4	11.0	7.8	44.0
625.6	13474.1	3.2	-5.4	53.0
566.8	16076.6	-2.8	-16.8	35.0
564.3	16191.8	-2.7	-26.4	14.0
542.4	17220.5	-4.1	-24.8	18.0
526.2	18004.7	-5.7	-14.0	52.0
510.6	18780.8	-6.0	-11.1	67.0
500.0	19320.4	-7.3	-11.6	71.0
494.8	19588.4	-7.6	-14.4	58.0
468.4	20985.0	-10.7	-15.6	67.0
463.8	21234.5	-11.4	-19.9	49.0
456.2	21650.7	-12.4	-24.0	37.0
448.8	22061.0	-13.5	-20.8	54.0
446.1	22212.1	-13.7	-26.8	32.0
439.8	22567.6	-14.0	-29.3	26.0
432.0	23015.5	-13.0	-32.8	17.0
400.0	24928.0	-17.7	-36.7	17.0
375.6	26464.4	-22.2	-37.6	23.0
361.8	27365.6	-24.7	-34.9	38.0
355.0	27819.9	-25.2	-27.1	64.0
342.0	28710.1	-26.4	-28.9	79.0

STATION ALTITUDE 3989.00 FEET MSL  
 11 SEP. 81 0600 HRS MDT  
 ASCENSION NO. 592

UPPER AIR UA1A  
 2540020.9<sub>z</sub>  
 WHITE SANDS  
 TABLE 7

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREEES CENTIGRADE	REL. HUM. PERCENT	SPEED OF SOUND KNOTS	DIRECTION DEGREES (TN)	WIND DATA SPEED KNOTS	INFLUX OF REFRACTION
		DEPOINT	CM/CUBIC METER	DEGREEES	DEGREEES		
3989.0	880.9	16.2	14.7	91.0	1052.9	665.1	20.0
4000.0	880.6	16.3	14.7	90.5	1052.1	665.2	19.3
4500.0	865.1	21.0	14.9	68.1	1017.1	670.6	1.4
5000.0	850.1	21.0	12.7	59.0	1000.2	670.4	354.5
5500.0	835.3	20.5	11.1	54.9	984.9	669.6	351.0
6000.0	820.5	19.6	9.8	53.2	970.8	668.5	332.0
6500.0	805.9	18.7	8.7	52.1	957.1	667.3	305.5
7000.0	791.6	17.7	7.5	51.1	943.5	666.0	294.3
7500.0	777.6	16.7	6.3	50.1	930.2	664.8	286.6
8000.0	763.8	15.7	5.1	49.0	917.0	663.6	281.7
8500.0	750.2	14.8	3.9	48.0	904.0	662.4	285.0
9000.0	736.9	13.8	2.7	47.0	891.2	661.2	290.1
9500.0	723.8	12.8	1.5	45.9	878.6	660.0	298.9
10000.0	711.0	11.8	1.3	44.9	866.2	658.8	308.0
10500.0	698.3	10.8	1.9	44.2	854.0	657.5	319.7
11000.0	685.5	9.5	-1.6	45.7	842.2	656.0	320.0
11500.0	673.0	8.3	-2.3	47.2	830.6	654.5	317.0
12000.0	660.6	7.0	-3.1	48.6	819.3	653.0	309.0
12500.0	648.5	5.7	-3.9	50.1	808.0	651.4	176.1
13000.0	636.7	4.4	-4.7	51.6	797.0	649.9	148.6
13500.0	625.0	3.1	-5.5	52.8	786.1	648.3	166.1
14000.0	613.2	2.0	-7.6	49.0	774.8	646.9	188.7
14500.0	601.7	.8	-9.7	45.0	763.7	645.4	212.5
15000.0	590.4	-3	-11.9	41.3	752.7	644.0	228.9
15500.0	579.3	-1.5	-14.1	37.4	741.9	642.6	241.8
16000.0	568.4	-2.6	-16.4	33.6	731.2	641.1	246.0
16500.0	557.6	-3.1	-25.9	15.2	719.1	640.3	242.2
17000.0	547.0	-3.8	-25.1	17.1	707.1	639.5	246.1
17500.0	536.6	-4.7	-19.5	30.1	695.6	638.6	251.1
18000.0	526.3	-5.7	-14.0	51.8	684.5	637.6	250.5
18500.0	516.2	-5.9	-12.1	61.6	671.6	637.1	247.3
19000.0	506.3	-6.5	-11.3	68.6	660.2	636.7	242.2
19500.0	496.5	-7.5	-13.4	62.3	650.0	635.5	230.2
20000.0	486.9	-8.5	-14.7	60.7	639.9	634.2	227.7
20500.0	477.4	-9.6	-15.2	63.9	630.2	632.9	228.4
21000.0	468.1	-10.7	-15.8	65.9	620.6	631.5	231.6
21500.0	458.9	-12.0	-22.5	41.3	611.8	629.6	234.0
22000.0	449.9	-13.3	-21.2	51.5	602.7	628.2	235.3
22500.0	441.0	-13.9	-28.8	27.1	592.4	627.4	237.7
23000.0	432.3	-15.0	-32.7	17.3	578.7	626.4	241.2

STATION ALTITUDE 3,889.00 FEET MSL  
 11 SEP. 81 0600 HRS MDI  
 ASCENSIO, JO. 592

UPPER AIR DATA  
 2540020322  
 WHITE SANDS

GEODETIC COORDINATES  
 32.40043 LAT deg  
 106.37033 LONG deg

TABLE 7 CON'T

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	DEWPOINT DEGREES	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SOUND SPEED KNOTS	WIND DIRECTION DEGREES (TN)	WIND SPEED KNOTS	INDEX OF REFRACTION
23500.0	423.7	-14.2	-33.8	17.0	569.4	627.0	242.2	18.3	1.000129
24000.0	415.2	-15.4	-34.9	17.0	561.1	625.5	241.8	17.2	1.000127
24500.0	406.9	-16.6	-35.9	17.0	552.6	624.0	234.8	15.4	1.000125
25000.0	398.8	-17.9	-36.8	17.3	544.2	622.5	229.8	14.2	1.000123
25500.0	390.7	-19.4	-36.9	19.2	536.2	620.7	229.5	13.3	1.000121
26000.0	382.8	-20.8	-37.2	21.2	528.4	618.9	229.1	13.8	1.000119
26500.0	375.0	-22.3	-37.4	23.6	520.7	617.1	228.7	14.8	1.000117
27000.0	367.3	-23.7	-35.7	31.9	512.8	615.4	230.7	16.1	1.000116
27500.0	359.8	-24.8	-31.9	51.6	504.5	614.0			1.000115
28000.0	352.3	-25.4	-27.5	63.0	495.2	613.4			1.000114
28500.0	345.0	-26.1	-26.5	80.2	486.2	612.5			1.000112

STATION ALTITUDE 3489.00 FEET MSL  
11 SEP. 61 0600 HRS MDT  
ASCENSION NO. 392

MANDATORY LEVELS  
25400 20592  
WHITE SANDS

EQUATORIAL COORDINATES  
32.40043 LAT DEG  
106.37033 LON DEG

TABLE 8

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	TEMPERATURE			WIND DATA
		DEGREES	AIR DEWPONT CENTIGRADE	KEL. HUM. PERCENT	
850.0	4999.	21.0	12.7	59.	354.5 50.0
800.0	6715.	18.3	8.2	52.	300.4 7.4
750.0	8520.	14.7	3.9	48.	285.2 9.4
700.0	10424.	11.0	-0.8	44.	317.7 6.5
650.0	12435.	5.9	-3.8	50.	188.8 .5
600.0	14566.	.7	-10.0	45.	215.5 4.8
550.0	16838.	-3.6	-25.3	17.	244.3 4.7
500.0	19293.	-7.3	-11.6	71.	231.3 16.5
450.0	21960.	-13.3	-21.2	51.	235.3 16.3
400.0	24886.	-17.7	-36.7	17.	229.6 14.3
350.0	28107.	-25.7	-27.8	82.	

STATION ALTITUDE 4051.37 FEET MSL  
11 SEP. 81 0700 HRS MDT  
ASCENSION NO. 201

SIGNIFICANT LEVEL DATA  
25401.00201  
LC-37

GEODETIC COORDINATES  
52°40'17.5 LAI DEG  
106°31'23.2 LON DEG

STATION ALTITUDE 4051.37 FEET ASL  
 11 SEP. 61 0700 HRS MDT  
 ASCENSION NO. 201

UPPER AIR DATA  
 2540160201

LC-37

GEODETIC COORDINATES  
 32°40'17.5" LAT UEG  
 106°31'23.2" LONG DEG

TABLE 10

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	DEWPOINT DEGREES CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DIRECTION DEGREES (TN)	INDEX OF REFRACTION
4051.4	879.6	16.2	14.7	91.0	1051.4	665.1	•0	1.000310
4500.0	865.7	18.6	14.6	77.4	1026.2	667.9	6.6	1.3
5000.0	850.6	20.3	13.4	64.5	1002.6	669.7	6.6	2.8
5500.0	835.7	20.0	12.0	60.0	986.8	669.1	6.6	1.000282
6000.0	821.1	19.5	10.5	55.9	971.5	668.5	6.6	1.000273
6500.0	806.6	18.7	9.3	54.3	957.6	667.4	4.6	1.000266
7000.0	792.4	17.6	8.0	52.7	943.8	666.3	317.8	4.6
7500.0	778.4	17.0	6.8	51.0	931.2	665.2	302.7	1.000259
8000.0	764.7	16.1	5.6	49.4	916.7	664.1	301.4	1.000252
8500.0	751.2	15.2	4.3	48.0	905.6	663.0	307.1	1.000245
9000.0	737.7	14.1	3.2	48.0	891.3	661.5	311.4	1.000239
9500.0	724.5	12.9	2.1	48.0	879.2	660.1	8.0	1.000234
10000.0	711.5	11.7	1.0	48.0	867.2	658.6	315.0	1.000229
10500.0	698.7	10.5	-0	48.2	855.4	657.2	316.8	9.0
11000.0	686.0	9.0	-7	50.5	844.2	655.5	319.0	8.5
11500.0	673.4	7.6	-1.4	52.8	833.1	653.7	325.1	6.5
12000.0	661.1	6.1	-2.2	55.1	822.2	652.0	342.7	4.1
12500.0	649.0	4.7	-3.1	56.5	811.3	650.4	92.9	1.7
13000.0	636.9	3.7	-4.9	53.2	799.5	649.0	137.4	1.000219
13500.0	625.1	2.6	-6.7	49.9	787.8	647.0	153.3	1.000216
14000.0	613.4	1.6	-8.6	46.6	776.3	646.4	174.6	1.000212
14500.0	602.0	•5	-10.5	43.3	765.0	645.0	189.1	1.000208
15000.0	590.7	-0.7	-11.7	43.0	754.2	643.5	105.1	1.000205
15500.0	579.5	-2.1	-12.5	44.8	743.6	641.9	217.6	2.4
16000.0	568.6	-3.2	-13.4	45.0	732.6	640.0	226.1	1.000194
16500.0	557.7	-3.4	-14.6	41.6	719.4	640.2	231.5	4.9
17000.0	547.1	-3.7	-15.8	38.2	706.4	639.9	235.4	1.000189
17500.0	536.7	-4.7	-20.1	28.7	695.7	638.6	244.0	5.9
18000.0	526.4	-5.7	-25.3	19.5	685.5	637.3	252.4	1.000178
18500.0	516.2	-6.5	-17.1	42.4	673.7	636.5	250.9	10.4
19000.0	506.3	-7.3	-12.7	65.3	662.3	635.8	248.5	1.000157
19500.0	496.5	-8.2	-10.9	80.4	651.4	634.6	241.0	11.7
20000.0	486.8	-9.2	-11.7	81.5	641.2	633.6	234.6	1.000159
20500.0	477.3	-10.2	-12.6	82.6	631.2	632.5	233.4	14.2
21000.0	468.1	-11.2	-13.4	83.7	621.4	631.1	232.3	1.000153
21500.0	458.8	-12.4	-14.4	84.6	612.0	629.6	232.0	15.6
22000.0	449.8	-13.7	-15.6	85.5	602.9	628.0	231.6	1.000147
22500.0	440.9	-15.0	-16.7	86.4	594.0	626.4	230.4	16.7
23000.0	432.1	-15.6	-18.6	77.7	585.8	625.6	220.4	1.000142
23500.0	423.5	-15.4	-23.5	49.5	571.9	625.7	227.7	1.000138
								1.000133

STATION ALTITUDE 4051.37 FEET MSL  
11 SEP. 81 0700 HRS MDT  
ASCENSION NO. 201

UPPER AIR DATA  
2540100.01  
LC-37

TABLE 10 CON'T

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION (DEGREES IN) SPEED KNOTS	INDEX OF REFRACTION
24000.0	410.1	-16.3	35.7	562.7	624.5	226.8	1.000129
24500.0	400.8	-17.5	37.9	553.9	625.1	224.7	1.000127
25000.0	390.6	-18.6	39.7	545.2	621.7	225.1	1.000125
25500.0	390.5	-19.8	42.7	536.7	620.2	224.4	1.000123
26000.0	382.5	-21.1	40.9	528.4	618.7	225.8	1.000120
26500.0	374.8	-22.3	39.1	520.2	617.1	227.0	1.000118
27000.0	367.1	-23.7	37.3	512.5	615.4	229.1	1.000116
27500.0	359.5	-24.2	37.2	504.5	613.8	231.1	1.000115
28000.0	352.1	-25.5	46.0	495.0	613.3	231.3	1.000113
28500.0	344.8	-26.2	33.2	486.1	612.4	231.3	1.000111
29000.0	337.6	-27.1	32.9	477.8	611.2	232.0	1.000109
29500.0	330.5	-28.3	34.7	470.2	609.6	233.0	1.000107
30000.0	323.5	-29.7	36.3	52.4	462.6	607.9	1.000105
30500.0	316.6	-31.1	37.9	50.9	455.6	606.2	1.000103
31000.0	309.9	-32.5	39.5	49.3	448.6	604.4	1.000101
31500.0	303.4	-33.9	41.1	47.8	441.6	602.7	1.000099

STATION ALTITUDE 4051.37 FEET MSL  
 11 SEP. 61 0700 HRS ADI  
 ASCENSION NO. 201

MANDATORY LEVELS  
 2540160201

LC-37

EQUATORIAL COORDINATES  
 32.40175 LAT UEG  
 106.31232 LONG DEG

TABLE 11

PRESSURE GEOPOTENTIAL MILLIBARS	FEET	TEMPERATURE		REL. HUM. PERCENT	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS
		AIR DEGREES	DEWPONT CENTIGRADE			
850.0	5015.	20.4	13.4	64.	6.6	20.9
800.0	6731.	18.3	8.7	54.	332.7	4.5
750.0	8537.	15.1	4.2	48.	307.4	7.3
700.0	10441.	10.6	.1	48.	316.7	6.5
650.0	12447.	4.8	-3.0	57.	85.3	1.1
600.0	14573.	.3	-10.8	44.	191.7	5.9
550.0	16842.	-3.6	-15.5	39.	234.4	6.2
500.0	19294.	-7.8	-10.0	80.	243.8	1.3
450.0	21957.	-13.6	-15.5	85.	231.6	16.7
400.0	24871.	-18.4	-27.6	43.	222.9	12.6
350.0	28091.	-25.6	-30.0	66.	231.3	21.0
300.0	31698.	-34.6	-41.9	47.		

STATION ALTITUDE 3980.0 FEET  
11 SLP. 01 080n HRS MDT  
AS, EUSTON 10. 593

SIGNIFICANT LEVEL DATA  
25400.0593  
WHITE SAILS  
AS, EUSTON 10. 593

ASTRO. COORDINATES  
52.40043 LAT UEG  
106.37033 LONG DEG

TABLE 12

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE DEGREES CENTIGRADE	AIR DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT
882.0	3989.0	18.0	15.6	86.0
864.4	4559.7	20.1	14.0	68.0
860.0	4704.4	19.1	12.6	66.0
850.0	5035.9	20.1	12.6	63.0
755.8	8343.4	15.9	3.4	43.0
700.0	10467.6	11.3	4.4	47.0
647.0	12607.9	5.4	-1.7	60.0
617.2	13069.3	2.6	-7.8	46.0
578.0	15601.7	-1.6	-9.7	54.0
561.0	16382.0	-2.5	-24.1	17.0
544.8	17144.2	-4.0	-10.2	38.0
535.2	17604.5	-5.5	-10.1	70.0
528.6	17924.7	-6.0	-13.3	56.0
520.6	18317.3	-6.2	-25.9	23.0
500.0	19354.2	-7.6	-10.0	83.0
492.8	19725.4	-8.5	-9.2	95.0
487.2	20017.7	-8.1	-9.0	93.0
446.5	22223.0	-14.4	-16.9	81.0
436.6	22783.6	-13.6	-16.6	66.0
426.2	23386.2	-14.4	-22.3	51.0
404.2	24701.9	-17.0	-36.8	16.0
400.0	24959.6	-17.5	-36.0	18.0
367.8	27007.5	-22.6	-34.7	32.0
354.0	27928.5	-24.3	-29.1	64.0
340.6	28852.7	-25.4	-34.0	44.0
334.0	29319.1	-26.6	-36.3	39.0
300.0	31836.4	-33.5	-41.5	44.0
289.6	32648.3	-35.7	-43.3	45.0
254.2	35506.6	-43.4	-49.9	48.0
250.0	35955.3	-44.1		
243.0	36580.6	-45.8		
200.0	40779.1	-53.7		
159.4	45498.8	-61.7		
150.0	46736.7	-62.6		
142.8	47734.4	-63.5		
135.0	48764.0	-66.4		
113.0	52393.3	-69.2		
100.0	54798.7	-69.8		
96.6	554132.4	-67.5		
91.4	56100.5	-67.7		

STATION "LITLUD" 3449.00 FEET "SL"  
11 SEP. '71 0800 HRS MD  
ASCENSION ISL. 293

SIGNIFICANT LEVEL DATA

GEODETIC COORDINATES  
32°40'43" LAT UEG  
106°37'03" LON UEG

25400.0095

WHITE SANDS

TABLE 12 CON'T

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	REL.HUM. PERCENT
76.0	61952.9	-61.9	
60.2	65051.8	-59.6	
52.6	67860.7	-56.5	
50.0	68923.6	-56.5	
47.8	69863.6	-58.1	
43.8	71693.0	-55.7	

STATION ALTIMETER 3498.00 FEET "SL  
11 SEP. 61 0800 HRS MDT  
ASCEND. 10. 593

UPPER AIR DATA  
2540020.93  
WHITE SAILS

TABLE 13

GEOMETRIC PRESSURE ALTITUDE MSL FEET	TEMPERATURE AIR DEPOSIT DEGREES CENTIGRADE	REL. HUM. PERCENT	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (IN) SPEED KNOTS	INDEX OF REFRACTION
3489.0	882.0	18.0	15.6	86.0	1.000313
4000.0	881.7	18.0	15.0	85.7	1.000313
4500.0	869.2	19.9	14.2	69.9	1.000300
5000.0	851.1	20.0	12.8	63.3	1.000269
5500.0	835.1	19.5	11.6	60.2	1.000261
6000.0	821.4	18.9	10.2	57.2	1.000273
6500.0	805.9	18.2	8.8	54.1	1.000265
7000.0	792.7	17.6	7.4	51.1	1.000257
7500.0	778.8	17.0	5.9	48.1	1.000249
8000.0	765.1	16.3	4.4	45.1	1.000242
8500.0	751.5	15.6	3.1	43.3	1.000236
9000.0	738.1	14.5	2.5	44.2	1.000232
9500.0	724.9	13.4	1.8	45.2	1.000228
10000.0	711.9	12.3	1.1	46.1	1.000224
10500.0	699.2	11.2	*4	47.2	1.000220
11000.0	686.4	9.8	-0	50.2	1.000217
11500.0	673.9	8.5	-5	53.3	1.000213
12000.0	661.6	7.1	-1.0	56.3	1.000210
12500.0	649.6	5.7	-1.6	59.3	1.000207
13000.0	637.6	4.5	-3.6	55.6	1.000201
13500.0	625.8	3.4	-6.0	50.1	1.000195
14000.0	614.2	2.3	-8.0	46.6	1.000189
14500.0	602.6	1.1	-8.4	48.9	1.000186
15000.0	591.3	-0.1	-9.0	51.2	1.000184
15500.0	580.2	-1.4	-9.5	53.5	1.000181
16000.0	569.3	-2.1	-15.4	35.1	1.000172
16500.0	558.5	-2.7	-22.4	20.3	1.000165
17000.0	547.8	-3.7	-17.2	34.0	1.000166
17500.0	537.4	-5.2	-11.1	62.7	1.000169
18000.0	527.0	-6.0	-14.8	49.7	1.000163
18500.0	515.9	-6.4	-19.8	33.6	1.000157
19000.0	505.9	-7.1	-13.0	62.5	1.000150
19500.0	497.2	-8.0	-9.6	87.7	1.000148
20000.0	487.5	-8.1	-9.0	93.1	1.000144
20500.0	478.0	-9.5	-10.8	90.4	1.000141
21000.0	469.6	-10.9	-12.5	87.7	1.000137
21500.0	459.5	-12.3	-14.3	64.9	1.000136
22000.0	450.5	-13.8	-16.1	82.2	1.000135
22500.0	441.6	-14.0	-17.7	73.6	1.000134
23000.0	432.8	-13.9	-19.8	60.6	1.000133

STATION ALTITUDE 3489.00 FLEET SL  
11 SLP. 61 080n HRS M DT  
ASCENSION NO. 393

UPPER AIR DATA  
254002093  
WHITE SANDS  
TABLE 13 CON'T

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE DEGREES CELSIUS	DEPOINT GRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA, DIR. CHT. DEGREES (TN)	WIND DATA, DIR. CHT. DEGREES (TN)	INFLX OF REFRACTION
23500.0	424.3	-14.6	-23.2	48.0	571.2	626.7	227.1	13.6	1.000113
24000.0	415.8	-15.6	-27.6	34.7	562.1	625.4	250.5	13.7	1.000119
24500.0	407.5	-16.6	-33.5	21.4	553.2	624.1	236.3	13.1	1.000125
25000.0	399.3	-17.6	-35.9	18.3	544.2	622.9	240.7	12.6	1.000123
25500.0	391.2	-18.8	-35.3	21.7	535.6	621.3	242.4	11.9	1.000121
26000.0	383.5	-20.1	-34.9	25.1	527.5	619.6	244.7	11.1	1.000119
26500.0	375.5	-21.3	-34.7	28.5	519.4	618.3	242.5	12.7	1.000118
27000.0	367.9	-22.6	-34.7	31.9	511.3	616.8	240.3	14.6	1.000116
27500.0	360.4	-23.5	-31.2	49.1	502.6	615.7	239.4	16.7	1.000115
28000.0	352.9	-24.4	-29.5	62.5	494.0	614.6	238.6	23.1	1.000113
28500.0	345.7	-25.0	-32.0	51.6	485.0	613.9	238.5	26.3	1.000111
29000.0	338.5	-25.8	-34.7	42.4	475.5	612.8	238.5	29.3	1.000108
29500.0	331.4	-27.1	-36.7	39.4	469.1	611.2	236.8	31.9	1.000106
30000.0	324.4	-28.5	-37.7	40.4	461.8	609.5	234.0	34.5	1.000104
30500.0	317.6	-29.8	-38.7	41.3	454.6	607.8	232.0	36.2	1.000103
31000.0	310.9	-31.2	-39.7	42.3	447.5	606.0	230.9	37.5	1.000101
31500.0	304.3	-32.6	-40.8	43.3	440.6	604.3	230.0	38.4	1.000099
32000.0	297.9	-33.9	-41.9	44.2	433.7	602.6	229.9	39.2	1.000098
32500.0	291.5	-35.3	-43.0	44.8	426.8	600.9	229.9	40.6	1.000096
33000.0	285.1	-36.6	-44.1	45.4	419.9	599.2	230.1	42.8	1.000094
33500.0	278.9	-37.9	-45.2	45.9	412.9	597.5	229.8	45.1	1.000093
34000.0	272.7	-39.2	-46.3	46.4	406.1	595.9	228.5	47.4	1.000091
34500.0	266.8	-40.6	-47.5	46.9	399.5	594.2	227.4	49.7	1.000090
35000.0	260.9	-41.9	-48.6	47.4	392.9	592.5	226.3	49.8	1.000088
35500.0	255.2	-43.2	-49.7	47.9	386.5	590.8	229.2	50.0	1.000087
36000.0	249.5	-44.2			379.7	589.4	232.5	47.1	1.000085
36500.0	243.9	-45.6			373.4	587.7	236.7	43.9	1.000083
37000.0	238.3	-46.6			366.4	586.4	240.2	40.7	1.000082
37500.0	232.9	-47.5			359.5	585.2	243.8	37.1	1.000080
38000.0	227.5	-48.5			352.8	584.0	244.8	36.3	1.000079
38500.0	222.3	-49.4			346.1	582.7	244.7	35.5	1.000077
39000.0	217.2	-50.4			339.6	581.5	243.5		
39500.0	212.2	-51.3			333.2	580.3	242.2		
40000.0	207.4	-52.2			327.0	579.0	242.0		
40500.0	202.6	-53.2			320.9	577.8	243.0	34.8	
41000.0	197.9	-54.1			314.7	576.6	242.1	32.7	
41500.0	193.2	-54.9			308.4	575.5	240.7	30.3	
42000.0	188.6	-55.8			302.2	574.4	238.4	29.0	
42500.0	184.1	-56.6			296.2	573.3	235.7	28.3	
43000.0	179.7	-57.5			290.3	572.1	235.5	28.7	

STATION ALTITUDE 3989.00 FEET "SL  
11 SEP. 61 0800 HRS MDT  
ASCENSION NO. 393

UPPER AIR UNIT  
2540020090  
WHITE SANDS  
TABLE 13. COW'S T

TABLE 13 CON'T

GEOMETRIC ALTITUDE IN FEET	PRESSURE IN MILLIBARS	TEMPERATURE DEGREES CENTIGRADE	AIR DEMPPOINT PERCENT	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SOUND KNOTS	WIND DATA DIRECTION LIEGRELLIN)	SPEED KNOTS	INDEX OF REFRACTION
43500.0	175.5	-58.5	284.5	571.11	237.0	30.1	1.000063		
44000.0	171.3	-59.2	278.9	569.9	238.6	31.4	1.000062		
44500.0	167.2	-60.0	273.3	568.8	240.2	32.5	1.000061		
45000.0	163.3	-60.9	267.9	567.6	242.1	32.7	1.000060		
45500.0	159.4	-61.7	262.0	566.5	245.3	30.9	1.000058		
46000.0	155.5	-62.1	256.0	565.9	248.4	29.2	1.000057		
46500.0	151.8	-62.6	251.1	565.3	252.7	26.9	1.000056		
47000.0	149.1	-63.0	245.4	564.8	257.3	24.6	1.000055		
47500.0	144.5	-63.3	239.9	564.3	257.7	22.5	1.000053		
48000.0	140.9	-64.2	234.9	563.2	255.5	20.5	1.000052		
48500.0	137.5	-65.5	230.6	561.4	251.6	18.8	1.000051		
49000.0	134.1	-66.5	226.0	560.0	245.2	17.4	1.000050		
49500.0	130.7	-66.9	220.8	559.5	237.9	16.3	1.000049		
50000.0	127.5	-67.3	215.8	558.9	230.4	15.6	1.000048		
50500.0	124.3	-67.7	210.8	558.4	222.3	15.2	1.000047		
51000.0	121.2	-68.1	205.9	557.9	217.1	15.4	1.000046		
51500.0	118.2	-68.5	201.2	557.3	212.2	15.7	1.000045		
52000.0	115.3	-68.9	196.0	556.8	208.2	16.1	1.000044		
52500.0	112.4	-69.2	192.0	556.3	204.7	16.5	1.000043		
53000.0	109.6	-69.4	187.3	556.2	203.0	16.6	1.000042		
53500.0	106.8	-69.5	182.7	556.0	209.1	15.5	1.000041		
54000.0	104.1	-69.6	178.2	556.8	215.3	14.6	1.000040		
54500.0	101.5	-69.7	173.9	556.6	214.1	9.1	1.000039		
55000.0	99.0	-69.1	169.0	556.3	203.8	3.1	1.000038		
55500.0	96.5	-67.5	163.3	556.7	99.6	1.9	1.000036		
56000.0	94.1	-67.6	159.5	556.6	89.1	4.3	1.000036		
56500.0	91.8	-67.7	155.6	556.5	87.9	6.2	1.000035		
57000.0	89.5	-67.5	151.0	556.7	80.6	4.7	1.000034		
57500.0	87.3	-66.9	147.5	556.5	131.8	3.9	1.000033		
58000.0	85.2	-66.8	143.5	560.2	114.1	4.9	1.000032		
58500.0	83.1	-65.8	139.6	561.0	95.3	7.1	1.000031		
59000.0	81.1	-65.2	135.6	561.8	85.5	9.4	1.000030		
59500.0	79.1	-64.7	132.1	562.5	78.5	11.2	1.000029		
60000.0	77.1	-64.1	128.5	563.3	73.7	13.1	1.000029		
60500.0	75.2	-63.5	125.0	564.0	79.4	14.5	1.000028		
61000.0	73.4	-63.0	121.0	564.6	85.7	16.0	1.000027		
61500.0	71.6	-62.4	118.3	565.5	89.5	17.0	1.000026		
62000.0	69.8	-61.9	115.2	566.1	96.8	17.7	1.000025		
62500.0	68.2	-61.5	112.2	566.8	103.4	18.7	1.000024		
63000.0	66.5	-61.1	109.3	567.5	105.3	18.2	1.000024		

STATION ALTITUDE 3483.00 FEET <sup>ASL</sup>  
 11 SEP. 51 0800 hrs MD  
 ASCENSIO, NO. 393

UPPER AIR DATA  
 2540020543  
 WHITE SAMUS

GEODETIC COORDINATES  
 32.40043 LAT DEG  
 106.37033 LON UEG

TABLE 13 CON'T

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	DEWPOINT CENTIGRADE	REL. HUM. PERCENT	SPEED OF SOUND METER KNOTS	WIND DIA. DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
63500.0	64.9	-60.8		106.5	567.8	107.3	17.6	1.00004
64000.0	63.4	-60.4		103.7	568.3	109.0	16.6	1.00003
64,000.0	61.8	-60.0		101.1	569.8	110.1	14.6	1.000023
65000.0	60.4	-59.6		98.5	569.3	111.7	12.7	1.000022
65,000.0	58.9	-59.1		95.9	570.0	112.1	11.5	1.000021
66000.0	57.5	-58.6		93.4	570.7	111.5	10.9	1.000021
66,000.0	55.2	-58.0		90.9	571.4	110.7	10.3	1.000020
67000.0	54.8	-57.4		88.5	572.2	105.7	11.0	1.000020
67500.0	53.5	-56.9		86.2	572.9	100.6	12.1	1.000019
68000.0	52.3	-56.5		84.0	573.4	96.3	13.4	1.000019
68500.0	51.0	-56.0		82.0	573.4	92.6	13.8	1.000018
69000.0	49.8	-56.6		80.2	573.3	89.1	14.3	1.000018
69500.0	48.6	-57.5		78.0	572.1			1.000017
70000.0	47.5	-57.9		76.9	571.5			1.000017
70500.0	46.4	-57.3		74.8	572.4			1.000017
71000.0	45.3	-56.6		72.8	573.3			1.000016
71500.0	44.2	-56.0		70.9	574.1			1.000016

STATION ALTITUDE 3989.00 FEET SL  
11 SEP. 61 0800 HRS MDT  
ASSEMBLION NO. 593

MANDATORY LEVELS  
25400<0593  
WHITE SANDS

, EQUATORIAL COORDINATES  
32°40.043 LAT DEG  
106.37033 LON DEG

TABLE 14

PRESSURE MILLIBARS	GEO-POTENTIAL FEET	TEMPERATURE DEGREES	WELL HUM. PERCENT	WIND DATA	
				AIR DEPOLWT	DIRECTION DEGREES (TN)
850.0	5032.	20.1	12.8	6.5.	26.3
800.0	6744.	17.9	8.1	5.5.	20.5
750.0	8551.	15.4	3.1	4.5.	32.3*4
700.0	10457.	11.3	0.4	4.7.	33.4*4
650.0	12470.	5.7	-1.0	5.9.	34.7*1
600.0	14601.	.8	-8.6	4.9.	212*2
550.0	16875.	-3.5	-18.1	31.	233*8
500.0	19327.	-7.6	-10.0	8.5.	23.5*5
450.0	21994.	-13.8	-16.2	8.2.	22.1*1
400.0	24917.	-17.5	-36.0	18.	240*1
350.0	28149.	-24.6	-30.5	58.	238*5
300.0	31772.	-35.5	-41.5	44.	229.9
250.0	35076.	-44.1			36.9
200.0	40679.	-53.7			232*0
175.0	43465.	-58.4			242*8
150.0	46609.	-62.8			237*2
125.0	50250.	-67.6			254*6
100.0	54628.	-69.6			224*4
80.0	59047.	-64.9			15.2
70.0	61739.	-61.9			211*1
60.0	64885.	-59.5			33.8
50.0	68662.	-56.5			82.2
					10.1
					95.7
					17.6
					112*0
					12.4
					14.2
					89.4
					14.2

\*\* AIR LAYER ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 4051.37 FEET MSL  
 11 SEP. 1964 0904 HRS MDT  
 ALTENSION 1.0. 202

SIGNIFICANT WIND DATA  
 25401.0±0.2  
 LC-37  
 52.40175 LAT DEG  
 106.31232 LON DEG

TABLE 15

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MILLIBARS MSL FEET	TEMPERATURE AIR DEWEPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT
860.7	4051.4	19.5	73.0
850.0	5059.5	21.0	58.0
792.8	7030.9	17.5	57.0
773.2	7733.5	16.8	45.0
754.0	8437.1	16.3	38.0
734.8	9155.8	14.5	40.0
700.0	10495.0	11.0	42.0
614.0	14031.3	1.6	65.0
605.2	14413.6	0.8	73.0
596.2	14808.9	-0.2	60.0
558.4	16523.4	-3.2	46.0
544.6	17172.5	-4.7	20.0
528.0	17970.6	-6.6	39.0
519.8	18373.1	-6.3	45.0
511.6	18781.5	-7.5	65.0
500.0	19369.1	-7.9	91.0
453.8	21829.6	-12.5	71.0
445.8	22276.7	-12.7	59.0
423.0	23590.9	-14.4	19.0
400.0	24977.0	-17.5	13.0
386.6	25812.9	-19.8	15.0
365.2	27194.6	-23.2	28.0
351.4	28120.1	-24.6	63.0
331.2	29530.6	-27.5	46.0
317.8	30505.0	-29.6	32.0
311.4	30981.5	-31.1	68.0
300.0	31847.8	-33.6	53.0

STATION ALTITUDE 4051.37 FEET S.L.  
11 SLP. C1 0904 HRS MDI  
ASCENSION NO. 202

WEATHER AIR DATA  
2540130020.  
LC-37

1.00010 CLOUDS  
32.40175 LAI LEG  
106.31232 LON LEG

TABLE 16

DEFAUT ALTITUDE	PRESSURE	TEMPERATURE	REL. HUM.	INTENSITY	WIND DIA.	WIND DIA.	WIND DIA.
AL. ALTITUDE	AIR DEPOINT	DEGREE C	PERCENT	GM/CURV	DEGREES IN	SPD. KNOTS	SPD. KNOTS
IN FEET	IN MILLIBARS	DEGREES CELSIUS	GRADE	METER	DEGREES IN	DEGREES IN	DEGREES IN
4051.4	880.7	19.5	73.0	104.0	0.0	0.0	1.000305
4500.0	860.9	20.2	13.7	66.3	102.0	61.9.5	1.000297
5000.0	851.8	20.9	12.6	58.9	100.5	67.0.2	1.000267
5500.0	830.9	20.2	11.6	57.8	98.7.6	61.9.1	1.000250
6000.0	822.2	19.3	10.7	57.5	97.5.5	56.8.2	1.000274
6500.0	807.8	18.4	9.8	57.3	95.9.6	61.7.1	1.000268
7000.0	795.7	17.6	9.0	57.0	94.5.9	66.0.1	1.000262
7500.0	779.7	17.0	6.2	49.0	93.1.7	61.5.2	1.000250
8000.0	765.9	16.6	3.6	42.5	91.7.1	61.4.5	1.000241
8500.0	752.3	16.1	1.9	38.2	90.2.7	61.3.8	1.000235
9000.0	738.9	14.9	1.3	39.6	89.0.6	61.2.5	1.000229
9500.0	725.7	13.6	0.4	40.5	87.0.7	61.0.8	1.000225
10000.0	712.7	12.3	-0.5	41.3	86.7.0	61.9.2	1.000221
10500.0	699.9	11.0	-1.4	42.0	85.5.5	61.7.7	1.000217
11000.0	687.0	9.7	-1.6	45.3	84.5.7	61.5.1	1.000214
11500.0	674.4	8.3	-1.9	48.5	83.2.2	61.4.0	1.000211
12000.0	662.0	7.0	-2.2	51.8	82.0.6	65.3.0	1.000208
12500.0	649.9	5.7	-2.6	55.0	80.9.6	65.1.5	1.000205
13000.0	637.9	4.3	-3.1	58.3	79.8.6	64.9.9	1.000202
13500.0	625.2	3.0	-3.6	61.5	78.7.7	64.8.3	1.000199
14000.0	614.7	1.7	-4.2	64.8	77.7.0	64.6.7	1.000196
14500.0	602.2	0.6	-7.5	54.5	76.6.0	64.5.0	1.000189
15000.0	591.9	-0.5	-10.4	55.1	75.4.8	64.3.9	1.000185
15500.0	580.7	-1.4	-12.6	42.3	74.3.5	64.2.7	1.000178
16000.0	569.7	-2.3	-17.7	29.4	73.1.9	64.1.5	1.000171
16500.0	558.9	-3.2	-24.9	16.6	72.0.8	64.0.3	1.000165
17000.0	546.2	-4.3	-24.4	18.9	71.0.0	64.5.0	1.000163
17500.0	534.7	-5.5	-21.1	27.8	69.5.3	63.7.6	1.000160
18000.0	522.4	-6.6	-18.1	39.4	68.0.5	63.6.4	1.000157
18500.0	511.2	-6.7	-15.0	51.2	67.5.2	63.5.4	1.000154
19000.0	500.3	-7.6	-11.3	74.7	66.4.3	63.5.4	1.000162
19500.0	497.4	-8.1	-9.6	89.9	65.2.4	63.4.9	1.000161
20000.0	487.7	-9.1	-11.0	85.9	64.2.1	63.3.7	1.000157
20500.0	475.2	-10.0	-12.5	81.4	63.1.9	63.2.5	1.000154
21000.0	463.9	-10.9	-14.1	77.7	62.1.9	63.1.4	1.000150
21500.0	459.7	-11.9	-15.6	73.7	61.2.1	63.0.2	1.000146
22000.0	456.7	-12.6	-17.5	66.4	60.1.6	62.9.3	1.000143
22500.0	441.8	-13.0	-20.7	52.2	59.1.0	62.0.7	1.000139
23000.0	432.1	-13.6	-21.2	37.0	58.1.0	62.7.6	1.000134
23500.0	424.5	-14.3	-31.4	21.8	57.1.1	62.0.9	1.000130

STATION ALTITUDE 4051.17 FEET MSL  
 11 SEP. 61 0904 HRS MDT  
 ASCENSION: 1.0. .02

UPFLR AIR DATA  
 25401.0202  
 LC-37

TABLE 16, CON'T

GEOM. PRESSURE	TEMPERATURE	REL. HUM.	SPD. OF	WIND DATA	INDEX
ALTITUDE MSL FEET	AIR DEPOINT DEGREES CENIGRADE	PERCENT	6M/CUBIC METER	WIND DIRECTION, DEGREES (IN)	OF REFRACTION,
24000.0	41.0.1	-15.3	-34.6	17.2	562.0 025.0 239.8 11.1 1.000127
24500.0	40.7.8	-16.4	-35.9	15.1	555.2 024.5 240.9 11.6 1.000125
25000.0	39.9.6	-17.6	-39.2	13.1	544.6 022.9 241.5 12.0 1.000122
25500.0	391.6	-18.9	-39.5	14.3	536.5 021.2 240.6 12.0 1.000121
26000.0	383.6	-20.3	-39.0	16.8	528.4 019.6 239.8 12.3 1.000119
26500.0	375.8	-21.5	-37.0	21.5	520.1 018.1 239.2 13.2 1.000117
27000.0	366.1	-22.7	-36.8	26.2	512.0 016.0 238.3 14.8 1.000116
27500.0	360.6	-23.7	-33.6	39.5	503.4 015.4 236.9 18.1 1.000114
28000.0	353.2	-24.6	-30.4	58.5	494.7 014.4 235.1 19.6 1.000113
28500.0	345.8	-25.5	-31.3	58.4	486.3 013.2 228.9 15.4 1.000111
29000.0	338.7	-26.5	-33.3	52.4	478.1 012.0 208.7 9.7 1.000109
29500.0	331.6	-27.4	-35.4	46.4	470.0 010.6 119.6 11.1 1.000107
30000.0	324.7	-28.5	-35.9	48.9	462.2 009.4 100.5 19.1 1.000105
30500.0	317.9	-29.6	-36.3	52.0	454.5 008.1 101.9 17.1 1.000103
31000.0	311.2	-31.2	-35.1	67.7	447.8 006.1 1.000102 1.000102
31500.0	304.5	-32.6	-37.8	59.0	440.9 004.3 1.000100 1.000100

STATION ALTITUDE 4051.37 FEET MSL  
 11 20 P. D. 0904 HRS MDT  
 ASCENS10N 40. <02

MANDATORY LEVELS  
 25401.0202

LC-37

TABLE 17

0000 T, C COORDINATES  
 32° 40' 17.5" LAT LEG  
 106° 31' 23.2" LONG LEG

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	TEMPERATURE DEGREES CENTIGRADE	WIND, DATA		
			AIR DEWPOINT DEGREES	REL. HUM. PERCENT	DIRECTION DEGREES(TN) SPEED KNOTS
850.0	5056.	21.0	12.4	58.	32.4 2.0
800.0	6771.	18.0	9.4	57.	25.9 2.4
750.0	8578.	15.9	1.8	38.	324.2 5.3
700.0	10485.	11.0	-1.4	42.	328.3 0.0
650.0	12495.	5.7	-2.0	55.	136.3 2.5
600.0	14624.	.2	-7.3	57.	195.6 3.8
550.0	16895.	-4.1	-24.6	18.	231.0 5.1
500.0	19342.	-7.9	-9.1	91.	238.5 1.56
450.0	22007.	-12.6	-17.7	65.	214.7 12.8
400.0	24935.	-17.5	-39.2	13.	241.5 12.0
350.0	28164.	-22.0	-30.1	62.	232.9 17.9
300.0	31783.	-33.6	-39.6	53.	

END  
DATE  
FILMED

11/18/81

DTIC